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EXAMINER

CANTELMO, GREGG

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,359

Applicant(s)

KEY ET AL.

Examiner

Gregg Cantelmo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-11 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that there is no clear reason for independence or distinctness with respect to the two species. This is not found persuasive because the apparatus of claims 1-11 are drawn to a battery terminal comprising anti-rotational system using a bosses and slots to prevent rotation whereas in claim 12 the ring is welded (without the boss system) to the terminal. The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statement filed July 19, 2001 has been placed in the application file and the information referred to therein has been considered as to the merits.

Drawings

3. The drawings received July 19, 2001 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 8, 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 8 recites the limitation "said groove" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not positively recite any groove. This also applies to claim 9, dependent upon claim 8 and claim 11 which recites the term at line 16 of the claim without antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 3,767,467 (Miller).

Miller discloses of a battery terminal to be secured to a battery case comprising: a terminal assembly 15 extending along a main axis and including a threaded insert a threaded bore and an outer metal portion having a base with an annular flange configured to engage an inner surface of the case 13; a ring configured to be disposed over said terminal assembly; and an anti-rotation system including first set of angularly-spaced bosses 32 with intervening slots (defined by the edges 33) formed on an outer surface of the case 13, a second set of angularly-spaced bosses 34 with intervening

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slots on a first side of said ring facing said case and 13 which are complementary with said first set of bosses and slots, and a set of recesses on a second side of said ring opposite said first side configured to receive portions of said terminal assembly (Figs. 3-5 as applied to claim 1).

Portions of said terminal assembly to be received into said set of recesses comprise end portions of an annular wall of said terminal assembly (Figs. 3-5 as applied to claim 2).

The annular wall is at least in part deformed into said set of recesses (col. 2, ll. 39-54 as applied to claim 3).

The annular wall is orbitally spin riveted (Figs. 3-5 and col. 4, ll. 46-68 as applied to claim 4).

The outer metal portion of said terminal assembly comprises lead (col. 2, ll. 7-8 as applied to claim 5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of U.S. patent No. 5,663,015 (Hooke).

The teachings of claim 1 have been discussed above and are incorporated herein.

The battery terminal further includes a sealing system, said sealing system comprising: an annular groove circumferentially extending in said flange on a side configured to engage said inner surface of said case (Figs. 3-5); a seal 37 configured to be disposed in said groove to form a seal between said inner surface of said case and said terminal assembly; and a sealant material disposed between said first side of said ring and said case (Fig. 3 as applied to claim 6).

The differences between the instant claims and Miller are that Miller does not explicitly teach of the gasket being an elastomeric material (claim 6) and further of a hot melt material (claim 7).

Use of silicone elastomeric gasket (i.e. a hot melt material) seals in battery terminals is known in the art as evidenced by Hooke (col. 4, ll. 60-65, as applied to claims 6 and 7).

Note that the specification does not provide specific materials apart from a generic hot melt elastomeric material.

The motivation for using a silicone gasket material in a terminal assembly is that it would provide an effective gasket seal between the terminal and the battery casing and prevent electrolyte from leaking out of the battery casing.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Miller by selecting the gasket material to be silicone since it would have provided an effective gasket seal

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between the terminal and the battery casing and prevented electrolyte from leaking out of the battery casing. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). MPEP § 2144.07.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of U.S. patent No. 4,076,908 (Bucker).

The teachings of claim 1 have been discussed above and are incorporated herein.

The differences between the instant claims and Miller are that Miller does not teach of providing a configuration which allows fluid to communicate between the case and groove of the terminal.

Bucker teaches that it is desirable to have the terminal and sealing area disposed in the acid to prevent terminal corrosion (col. 2, ll. 35-42).

The motivation for allowing the acidic electrolyte to communicate between the terminal and interior of the case is to prevent terminal corrosion.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Miller by allowing the acidic electrolyte to communicate between the terminal and interior of the case since it would have prevented terminal corrosion.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of U.S. patent No. 4,351,890 (Oxenreider).

The teachings of claim 1 have been discussed above and are incorporated herein.

The differences between the instant claims and Miller are that Miller does not explicitly teach of welding the ring and terminal together.

Oxenreider teaches that it is known in the art to weld terminals to the casing (abstract).

Welding the terminal to the casing improves the sealing of the terminal and casing and also improves the anti-rotational properties of the terminal.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Miller by welding the terminal and casing together since it would have improved the sealing of the terminal and casing and also improved the anti-rotational properties of the terminal.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Hooke and Bucker.

Miller discloses of a battery terminal to be secured to a battery case comprising: a terminal assembly 15 extending along a main axis and including a threaded insert a threaded bore and an outer metal portion having a base with an annular flange configured to engage an inner surface of the case 13; a ring configured to be disposed over said terminal assembly; and an anti-rotation system including first set of angularly-spaced bosses 32 with intervening slots (defined by the edges 33) formed on an outer surface of the case 13, a second set of angularly-spaced bosses 34 with intervening slots on a first side of said ring facing said case and 13 which are complementary with

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said first set of bosses and slots, and a set of recesses on a second side of said ring opposite said first side configured to receive portions of said terminal assembly (Figs. 3-5 as applied to claim 11).

The differences between the instant claims and Miller are that Miller does not teach of the gasket being an elastomeric material or providing a configuration which allows fluid to communicate between the case and groove of the terminal.

With respect to using an elastomeric seal:

Use of silicone elastomeric gasket (i.e. a hot melt material) seals in battery terminals is known in the art as evidenced by Hooke (col. 4, ll. 60-65, as applied to claims 6 and 7).

Note that the specification does not provide specific materials apart from a generic hot melt elastomeric material.

The motivation for using a silicone gasket material in a terminal assembly is that it would provide an effective gasket seal between the terminal and the battery casing and prevent electrolyte from leaking out of the battery casing.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Miller by selecting the gasket material to be silicone since it would have provided an effective gasket seal between the terminal and the battery casing and prevented electrolyte from leaking out of the battery casing. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v.*

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Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945) See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). MPEP § 2144.07.

With respect to permitting fluid to communicate between the case and groove:

Bucker teaches that it is desirable to have the terminal and sealing area disposed in the acid to prevent terminal corrosion (col. 2, ll. 35-42).

The motivation for allowing the acidic electrolyte to communicate between the terminal and interior of the case is to prevent terminal corrosion.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Miller by allowing the acidic electrolyte to communicate between the terminal and interior of the case since it would have prevented terminal corrosion.

Allowable Subject Matter

14. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record appear to teach, suggest or render obvious the configuration of claim 9.

While it is held to be obvious to permit flow of the acidic electrolyte between the casing and terminal sealing means, none of the prior art of record appear to teach,

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suggest or render obvious the structural configuration of claim 9 wherein the communication means comprises a plurality of radially oriented bores extending from a radially outer surface of the base of the terminal assembly to the groove.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (703) 305-0635. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached on (703) 308-2383. FAX communications should be sent to the appropriate FAX number: (703) 872-9311 for After Final Responses only; (703) 872-9310 for all other responses. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

gc



August 10, 2003